

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
FACT SHEET
(pursuant to NAC 445A.236)

Permittee Name: Weed Heights Development
2 Austin Avenue
Yerington, NV 89447

Permit Number: NEV89026

Location: Weed Heights Development, Lyon County
Located approximately 2.5 miles west of Yerington
Latitude: 39° 00' 39"N, Longitude: 119° 12' 09"W
Township 13N, Range 25E, Section 5

General: Weed Heights was originally founded in 1952 as a community for employees of the Anaconda Copper Co., which ceased mining operations in 1978. Today, approximately 50% (160 units) of the original housing units are occupied along with a café, RV-park, and several small retail businesses. The original wastewater treatment system in 1952 consisted of a battery of three septic tanks, each having an approximate capacity of 38,000 gallons. The septic tank effluent flows one (1) mile north via gravity sewer to facultative treatment ponds #1 & #2, which were constructed in 1989. Two bentonite-lined facultative ponds are used in series to provide secondary (biological) treatment of the septic tank effluent. Ponds #1 and #2 occupy 0.91 and 0.97 acres, respectively, at the design operating depth of 3.5 feet. The secondary-treated effluent is then discharged in series to two evaporation/percolation basins. Each evaporation/percolation basin occupies approximately 0.9 acres. The evaporation/percolation basins are unlined and were built on top of low-permeability ($\approx 10^{-6}$ cm/sec) silty sand materials, previously used in the copper mining operations as tailings ponds. Due to the low permeability silty sand tailings, evaporative processes provide the bulk of treated effluent removal in the evaporation/percolation basins.

Receiving Water Characteristics: Monitoring wells #1 and #2 are located approximately 150 ft. north of treatment ponds #1 & #2 (MW-1) and the evaporation/percolation basins (MW-2). Groundwater characteristics¹ are shown in Table 1 below:

Table 1:

	TDS, mg/L	Chlorides, mg/L	Nitrate as N, mg/L	Total Nitrogen, mg/L	Depth to Groundwater, Feet
MW-1	10,688	126	<0.5	1.0	22
MW-2	35,625	501	2	2	20

¹: 4th Quarter 2004 to 3rd Quarter 2006

The groundwater is reported to flow in a north-northwest direction from the site. The elevated TDS is due to the historic mineral processing activities at this site. An indicator of groundwater contamination from the operation of the treatment ponds would be nitrate from oxidation of waste organic material.

Effluent Characteristics: Influent/Effluent¹ characteristics are as described below:

CBOD-Influent²: 185 mg/L
 CBOD-Effluent³: 30 mg/L
 % Removal: 83.8
 TSS-Influent²: 410 mg/L
 TSS-Effluent³: 72 mg/L
 % Removal: 82.4
 pH-Effluent³: 7.4 Standard Units
 Flow: 26,250 Gallons per Day

¹: 4th Quarter 2004 to 3rd Quarter 2006

²: Influent is defined as wastewater flow prior to entering the septic tanks.

³: Effluent is defined as treated discharge from facultative pond #2 flowing to the evaporation/percolation basins.

Proposed Effluent Limitations and Special Conditions:

Table 2: Plant Discharge Limitations

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	30-Day Average	Daily Maximum	Measurement Frequency	Sample Type
Flow, MGD (Influent) ¹	0.063		Continuous	Float-Activated Counter in Dosing Tank
CBOD, mg/L (Influent) ¹	Monitor & Report		Quarterly	Discrete
CBOD, mg/L (Effluent) ²	30	45	Quarterly	Discrete
TSS, mg/L (Influent)	Monitor & Report		Quarterly	Discrete
TSS, mg/L (Effluent) ²	90		Quarterly	Discrete
pH, Standard. Units (Effluent) ²	Between 6.0 & 9.0		Quarterly	Discrete
Scum/Sludge/Liquid Depths, feet or inches (Each Septic Tank)	Monitor & Report		Twice/Year (Apr./Oct.)	Discrete

¹: Influent is defined as wastewater flow prior to entering the septic tanks.

²: Effluent is defined as treated discharge from facultative pond #2 flowing to the evaporation/percolation basins.

Table 3: Groundwater Monitoring (MW-1 & MW-2)

PARAMETER	DISCHARGE LIMITATIONS	MONITORING REQUIREMENTS	
		Measurement Frequency	Sample Type
TDS, mg/L	Monitor & Report	Quarterly	Discrete
Chlorides, mg/L	Monitor & Report	Quarterly	Discrete
Nitrate as N, mg/L	Monitor & Report	Quarterly	Discrete
Total Nitrogen as N, mg/L	10.0 mg/L	Quarterly	Discrete
Depth to Groundwater, ft	Monitor & Report	Quarterly	Field Measurement

Rationale for Permit Requirements: The Division's rationale for the proposed monitoring conditions is as follows:

- *Groundwater Monitoring:* Quarterly groundwater sampling for depth to groundwater, total dissolved solids (TDS), chlorides, nitrate as nitrogen, and total nitrogen is required to ensure that State groundwater resources are not impacted from effluent percolation.
- *Flow:* Flow is tracked to ensure that the design capacity of the treatment system is not exceeded and reporting to the Division is made at 85% of the 30-day design capacity limit.
- *CBOD & TSS:* Presently, this permit does not have secondary-treatment performance standards. On February 26, 1998, the Division notified the Permittee in writing that the renewed permit conditions would incorporate secondary treatment limits, consistent with other regulated pond systems discharging to groundwaters of the State of Nevada. According to the design specifications for the two ponds and septic tanks, overall BOD₅ and TSS reductions were 84% and 82%, respectively which are equivalent to secondary performance standards in mechanical plants. The Division's secondary treatment CBOD standards for pond effluent are 30 mg/L and 45 mg/L for the 30-day average and daily maximum values, respectively. The Division's secondary treatment standard, in pond effluent, for Total Suspended Solids (TSS) is 90 mg/L.
- *pH:* The Division requires the effluent to meet a pH limitation of between 6.0 and 9.0 standard units.

Schedule of Compliance: The Permittee shall submit the following items to the Division for review and approval:

- Division inspections of this facility in 1999, 2002 and again in 2005, indicate that weed (e.g., cattails) removal in ponds #1-2 and the evaporation/percolation basins is necessary to prevent further damage

of the liners from root intrusion. Vegetation removal is also required to remove quiescent spots attractive to vectors (e.g., mosquitoes). Within thirty (30) days of permit issuance (**Month XX, 2007**) the Permittee shall submit a schedule for routine vegetation (weed) removal in a method protective of the liner integrity.

- Within thirty (30) days of the permit issuance (**Month XX, 2007**), the Permittee shall submit to the Division an Operations & Maintenance (O&M) Manual for the wastewater collection, septic tanks, and treatment/disposal facility, prepared in accordance with the Division's WTS-2 guidance document entitled *Minimum Information Required for an Operations and Maintenance Manual*.

Procedures for Public Comment: The Notice of the Division's intent to issue (renew) a permit authorizing the facility to dispose of secondary-treated effluent via evaporation and percolation, subject to the conditions contained within the permit is being sent to the **Reno Gazette-Journal** and **Mason Valley News** (Yerington) for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of thirty (30) days following the date of publication of the public notice in the newspaper. The comment period can be extended at the discretion of the Administrator. The deadline date and time by which all written comments are to be postmarked (via mail) or transmitted to the Division via fax or e-mail is **April 16, 2007 by 5:00 P.M.**

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons.

The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination: The Division has made the tentative determination to issue (renew) the proposed discharge permit for a period of five (5) years.

Prepared by: James T. Hogan
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Bureau of Water Pollution Control

Date: March 8, 2007

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